

REMARKS

Claims 1, 2 and 4-13 are currently in the case. Applicant has amended independent claim 1 and has added new independent claim 8 to the case. Support for new independent claim 8 is found in the instant specification at page 2. Thus, Applicants submit that new independent claim 8 does not introduce new matter and that all claims are in condition for allowance.

35 U.S.C. §112 Rejections

Claims 1, 2 and 4-7 stand rejected under 35 U.S.C. § 112 because “the recited “amu” . . . [per claims 1 and 5] constitutes indefinite subject matter as per the type of molecular weight intended is not readily ascertainable.” Applicants have removed this limitation from claim 1 and have amended claim 5 to recite the term number average molecular weight in place of “amu.” Applicants respectfully submit that the amended language removes any alleged indefiniteness from the claims.

35 U.S.C. § 102 and 103 Rejections

Claims 1, 2 and 4-7 stand rejected under 35 U.S.C. § 102(e) as anticipated by U.S. Pat. No. 6,231,768 to Barham et. al. (hereinafter “Barham”). Claims 1, 2 and 4-7 also stand rejected under 35 U.S.C. § 103 over U.S. Pat. No. 4,688,588 to Horsely et. al., in combination with Barham.

Applicants submit herewith an affidavit pursuant to 37 C.F.R. § 1.131, which attests to the fact that Applicant’s date of invention antedates the filing date of Barham. Thus, Barham is no longer applicable as prior art, and both of the foregoing rejections necessarily fall.

Claims 1, 2 and 4-7 also stand rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Pat. No. 4,509,987 to Farrar et. al. (hereinafter “Farrar”). The Office Action, at page 5, states Farrar’s examples B-F “anticipate the instantly claimed invention.”

With respect to independent claim 1, Applicants respectfully submit that Farrar does not teach or suggest “modifying the rheology of a slurry of a solid material and water, wherein the solid material is nickel ore, cobalt ore, precious metals ore, copper ore, taconite, mineral sands, coal bauxite or a mixture thereof,” or “wet grinding the slurry in a mill.” Farrar discloses the use of dispersing agents in a slurry of common sand to maximize the solids content of calcium

carbonate. Applicants' invention, on the other hand, involves rheology modification to substances distinct from common sand. Although Applicants' claims recite substances, such as mineral sands, which include TiO_2 (known as rutile) and ZrSiO_4 (known as zircon), these substances are chemically distinct from common sand -- SiO_2 , (known as quartz).

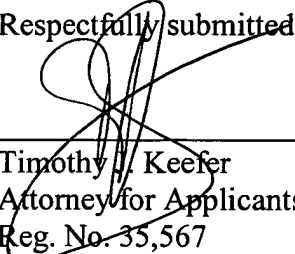
Moreover, Farrar does not render claim 1 obvious, as Farrar is directed to an entirely different application. That is, Farrar seeks to maximize the solids content of calcium carbonate in dispersions, not modify the viscosity of solids in a mill. Farrar, therefore teaches away from Applicants' invention, as recited by amended independent claim 1. Not only does Farrar teach away, but, as stated by Applicants' specification at page 2, use of Applicants' rheology modifier in a mill exhibits secondary indicia of obviousness, including but not limited to higher throughput and lower energy consumption.

With respect to new independent claim 8, Applicants respectfully submit that Farrar does not teach or suggest "pumping a slurry of a solid material and water from a mine to a processing plant." For the same reasons given for independent claim 1, nor does Farrar render claim 8 obvious because Farrar teaches away from the instantly claimed invention (*i.e.*, Farrar is concerned with the solids content of calcium carbonate, not pumping slurries from mines to processing plants). In addition, as stated by Applicants' specification, at page 2, lines 8-15, the process of claim 8 exhibits secondary indicia of non-obviousness, including but not limited to a potential reduction in pumping costs associated with the pumping step.

CONCLUSION

In view of the foregoing, Applicants request reconsideration and allowance of claims 1, 2 and 4-13 in due course. If, in the Examiner's opinion, a telephonic interview would expedite allowance of the claims, the undersigned attorney invites the Examiner to call him at the telephone number given below.

Respectfully submitted,



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on 6/26/03
Mary Anne Everett